U.S. Fish and Wildlife Service

Peaks to Prairies: *Mountain-Prairie Regional Newsletter*

Vol 1 Issue 3 FALL 2013

Focus on...

FIELDWORK

DEDICATION

information-gathering

investigate

examination

work done outside normal place

fact-finding

social or anthropolocial research

social research among population

OBSERVE

exploration

gain knowledge through direct contact or observation

exploration

information

Biologist Eric Cole completes forage production sampling in Wyoming

Jenny Neale marks the spot of an endangered plant

SCA intern Jennifer Mays in the field

Send Your Comments

Any comments or suggestions can be emailed to kate_miyamoto@fws.gov.

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.

U.S. Fish and Wildlife Service

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Welcome

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Matt Hogan and Todd Gallion at Lake Ilo National Wildlife Refuge

Entrance sign

Frozen plants at Bear River Migratory Bird Refuge

Although I must admit to spending way too much time in the Regional Office lately, and not enough "in the field," a short time ago, I had the pleasure of visiting Todd Gallion at Lake Ilo National Wildlife Refuge in Dunn Center, North Dakota. Lake Ilo was originally established as a water conservation project, and in 1939 President Roosevelt, by Executive Order, established the area as a refuge for migratory birds and wildlife. Todd is the Project Leader at this small refuge, sitting at the edge of the extensive oil development occurring in western North Dakota. Todd tells me the energy development is changing the character of the local communities and to some extent the public use on the refuge. Todd is a one-man shop at Lake Ilo, doing a great job in these changing times, managing to protect the character of the refuge even as the surrounding landscape is changing to support the nation's energy needs.

During the government shutdown this fall, I became acquainted with Kurt Eversman, Assistant Project Leader at Valley City National Fish Hatchery in North Dakota. Kurt is the sole employee keeping our facilities at Valley City operational and ensuring that we can continue to produce northern pike, walleye, pallid sturgeon, and other native species for stocking into the waters of North Dakota as part of a longterm, and strong partnership with North Dakota Game and Fish. "One of my goals is to think outside the box to help solve the challenges at the facilities I manage," said Kurt.

These two individuals are two examples of the great work that is being done across the Region by our folks in the field, day in and day out. Right here in the Regional Office, we have a group of people who work for the field every day. Kathy Dennis oversees our Budget and Administration program, without which we would have no field work! From Information Resources and Technology Management that keeps us connected to the outside world, to Budget and Finance that keeps us solvent, to our Safety Office, Kathy's staff makes it possible for us to carry out the mission of the U.S. Fish and Wildlife Service by supporting our field functions. Most recently, Kathy led the development of our Employee Development Program Handbook – a resource which I hope all of our field structure will take advantage of as you think about your professional development goals and draft your Individual Development Plan.

It is folks like these three that make up the heart and soul of the U. S. Fish and Wildlife Service. I'm looking forward to getting out and visiting more of our field stations and partners in the coming months. Next on my planned visits is a trip to the National Elk Refuge in Jackson, Wyoming!

-Noreen Walsh, Regional Director

Regional Director's Corner

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by Steve Segin, Public Affairs Specialist

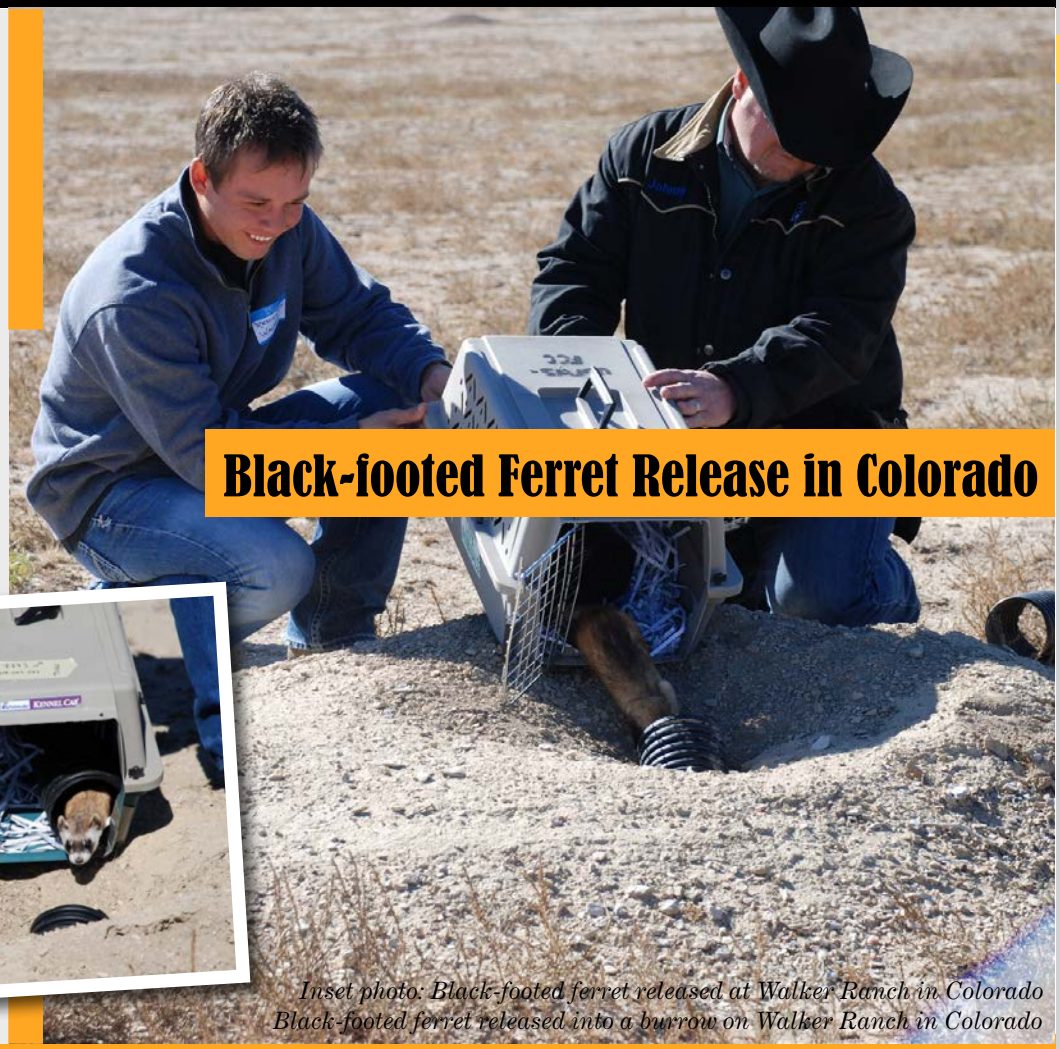
Black-footed Ferret Release in Colorado

As part of the recently approved Black-footed Ferret Programmatic Safe Harbor Agreement (SHA), thirty black-footed ferrets found a home in Colorado this past October. The ferrets, which are one of North America's most endangered mammals, were reintroduced on the Walker Ranch west of Pueblo.

In 1967, the black-footed ferret was among the first species to be listed as endangered. Today, outside Colorado, there are about four hundred alive in the wild at twenty experimental sites. The Walker Ranch was the second reintroduction in Colorado and the first under the new SHA.

"Ending ferrets' long stint as endangered is entirely doable," said Pete Gober, director of the National Black-footed Ferret Conservation Center, the Service's main breeding complex, which is located northeast of Fort Collins.

The Programmatic SHA was created in cooperation with state, tribal, federal, and local partners in twelve states. This SHA provides opportunities for private and tribal landowners to volunteer their lands as sites for reintroduction of this endangered species without affecting their land-use activities beyond mutually agreed-upon measures. It also extends these assurances to surrounding non-participating lands and other landowner interests via a Section 7 Biological Opinion (BO) for the SHA. This SHA approach will be an important step in promoting the recovery of this iconic species.
(continued)



Inset photo: Black-footed ferret released at Walker Ranch in Colorado
Black-footed ferret released into a burrow on Walker Ranch in Colorado

Black-footed Ferret Release in Colorado

"What happened on Walker Ranches is a result of 'landmark legislation' and cooperation between state, federal and private entities," said Gary Walker. "This isn't just about one endangered species, the black-footed ferret being released and hopefully saved on one ranch. This is about legislation and agreements that protect the landowner with hope that others will want to follow suit in an effort to help the balance of nature without fear of government actions."

The Walker Ranch was selected because they have prairie dogs, and the black-footed ferret is a highly specialized predator that depends upon prairie dogs for survival. Prairie dogs make up more than ninety percent of the black-footed ferret's diet and prairie dog burrows provide ferrets with suitable dens to raise their young, as well as a means to escape from predators and harsh weather.

"We went from 3,000 acres of prairie dogs to 10,000 acres of prairie dogs," Walker said. It was a matter of necessity that Walker decided to allow ferrets on his property. "We started shooting them and we would kill 500 to 600 in a day, but the animal population would recover. That's when we decided to employ the black-footed ferret."

But possibly more important than controlling the prairie dog population, Walker said the reintroduction was an effort of many different entities working together for years to, "make sure the right things were accomplished."

The reintroduction was spearheaded by the Mountain-Prairie Region, Colorado Parks and Wildlife, the Cheyenne Mountain Zoo and Gary and Georgia Walker. ■

Gary Walker releases a black-footed ferret on his ranch in Colorado

Black-footed ferret runs free on Walker Ranch

by Leith Edgar, Public Affairs Specialist

A Crisis in the Prairies

A new wave of grassland loss continues to accelerate across the Northern Great Plains. One peer-reviewed estimate claims North and South Dakota alone are losing more than 12 acres of grassland per hour.

The dire situation for American grasslands was created by a variety of factors, including changes in the value of commodities within the global market economy. Ongoing increases in global demand for soybeans and corn, coupled with crop subsidies, created greater financial incentive for landowners to grow them as cash crops. This conversion of grasslands is threatening one of North America's most imperiled landscapes and prompted the U.S. Fish and Wildlife Service's (Service) Director to declare a "Crisis in the Prairies."

Conversion of grasslands from native prairie and the loss of the Conservation Reserve Program (CRP) are having a detrimental effect on resident and migratory wildlife. The Prairie Pothole Region (PPR), so named for its, glacially formed wetlands, is the breeding epicenter for the majority of North America's waterfowl. The North American duck factory, as it's commonly referred to, consists of prairie wetlands and uplands, which are crucial to the production of waterfowl. It's also the most important area on the continent for many species of grassland, shore, and water birds.

"We know that waterfowl need grassland habitat in the Prairie Pothole Region each year in order to reproduce and we're witnessing the disappearance of many historical breeding grounds in the Prairie Pothole Region at an alarming rate," said Matt Hogan, Region 6 Deputy Regional Director.
(continued)

Prairie being converted to cropland

Wetlands at Miner pasture

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A Crisis in the Prairies

Prairie potholes in South Dakota

The Crisis in the Prairies has been so rapid that the full effects of conversion on wildlife aren't clear yet, though many biologists continue to study the affected grasslands. Some researchers have said the present situation is similar to the Dust Bowl of the 1930s because the landscape has changed so drastically in such a relatively short period of time.

"We are trying to address this conservation challenge by working pro-actively on conservation matters of mutual concern with private landowners, especially the livestock ranching community. We want to ensure that the Prairie Pothole Region continues to support profitable and sustainable agriculture, and produces waterfowl for many generations to come," said Kurt Forman, Partners for Fish and Wildlife Program, South Dakota State Coordinator.

The loss of grasslands and wetlands in the PPR has far reaching consequences beyond those that are being felt by fish and wildlife. Moreover, as these vital habitats are lost, the natural flood-absorbing properties of healthy wetlands and grasslands are being diminished at a time when the Dakotas are already experiencing annual spring floods.

Beyond the threat of intensified flooding in the PPR, the Crisis in the Prairies is also threatening an iconic way of life –livestock ranching. Healthy grasslands are the foundation of the nation's ranching culture and economy. The continued loss of grasslands poses an uncertain future for wildlife and landowners alike. ■

The Service has made combating the Crisis in the Prairies one of its highest priorities and is working with its conservation partners to reverse this troubling trend. For more info on the Crisis in the Prairies, please click here.

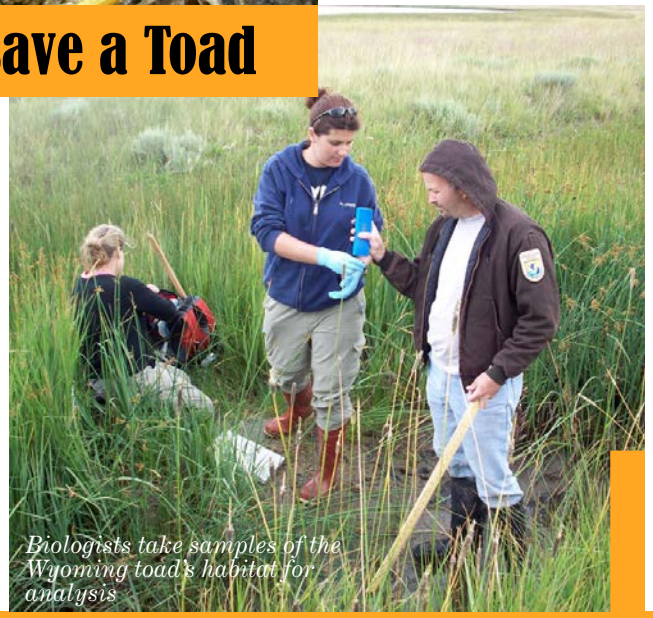
by Karen Miranda Gleason,
Public Affairs Specialist

Wyoming toad

Using Fire to Save a Toad

"I never thought I'd be burning prairie to help a toad," Felix Valdez said last spring. But that's exactly what he was doing.

Valdez, a U.S. Forest Service fire management officer, is working with U.S. Fish and Wildlife Service (Service) managers and biologists under the multi-agency Wyoming Toad Recovery Team, and other partners at Mortenson Lake National Wildlife Refuge in Wyoming, to conserve the last known population of the Wyoming toad *(Bufo baxteri).*



Biologists take samples of the Wyoming toad's habitat for analysis

The Wyoming toad, now the most endangered amphibian in North America, once flourished in the wetlands and rivers of southeastern Wyoming. This species is especially small for a toad, averaging just over two inches in length. By the mid-1970s, the population was in decline likely due to a combination of insecticide use, changes in climate, agricultural practices, predation, and disease. In 1984, the toad was listed under the Endangered Species Act (ESA), and in 1993, The Nature Conservancy helped establish the refuge to protect the species.

In April 2012, Valdez was the burn boss for a prescribed burn project designed to give the native toad what it needs to survive: water and warmth. Studies show the Wyoming toad requires pockets of warm, shallow water to breed. Historically, livestock grazing kept rushes in check, allowing plenty of sunlight to warm the waters. Over time, grazing declined, requiring prescribed fires to keep plant growth in check. Without the prevention of overgrowth on this high plains prairie, biologists are concerned that Wyoming toads won't survive in the wild. So, prescribed fire, along with prescribed grazing, is part of a collaborative recovery plan to achieve self-sustaining populations and ultimately delist the species.

Another part of the recovery plan includes a captive breeding program at Saratoga National Fish Hatchery in Wyoming and the University of Wyoming's Red Buttes Biological Lab, and various zoos. To date, almost 40,000 tadpoles and toadlets have been released into the wild. Researchers continue to study the toad's habitat requirements and the best strategies for releasing captive tadpoles and toadlets.

Nearly 30 years after it gained federal protection, the Wyoming toad is still with us today. While the toad has been extirpated from much of its historic habitat and is still a federally endangered species, there is great hope for the species' future thanks to these ongoing coordinated conservation efforts. ■

by Bob Harms, Fish and Wildlife Biologist, Nebraska Ecological Services Field Office

American Burying Beetle

From Nebraska on Their Way to Ohio

The U.S. Fish and Wildlife Service, University of Nebraska at Kearney, Nebraska Game and Parks Commission, and Henry Doorly Zoo teamed-up for a few days in September 2013 to collect forty endangered American burying beetles (ABB) in the Nebraska Sandhills. The ABBs were collected by setting 20 pitfall traps baited with rotten rat carcasses - a stinky but necessary proposition to capture a species attracted to the smell of decaying flesh. Traps were monitored for three days. Over 120 ABBs were trapped; twenty male and twenty females were selected and shipped to the Cincinnati Zoo in Cincinnati, Ohio and paired-up where they will mate. Their offspring will be released in Ohio by the Ohio Division of Wildlife, Cincinnati Zoo, and The Wilds in early summer 2014.

"It was a great team effort, we all pulled together to gather these unique insects," said Robert Harms a Fish and Wildlife Biologist at the Nebraska Ecological Services Field Office in Grand Island, NE.

Efforts to reintroduce the ABB to Ohio have been going on for some time now, but with little evidence of success. ABBs are mobile and can travel two to five miles per night making monitoring for success difficult. The recent switch to Nebraska beetles in 2013 was made because of their ability to tolerate cold winter conditions better than ABBs collected in warmer climates like Arkansas and Oklahoma. Once reintroduced in 2014, the Nebraska ABBs will be monitored to determine if the reintroduction was successful. *(continued)*

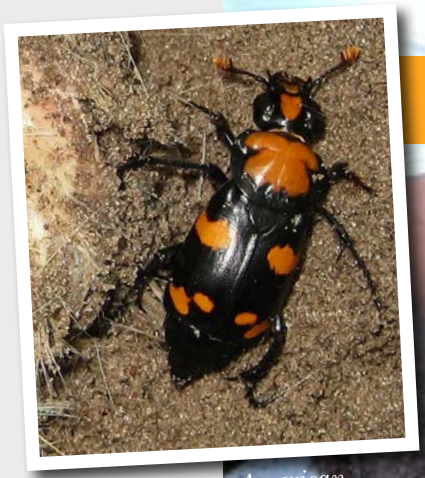
Two American burying beetles

by Bob Harms, Fish and Wildlife Biologist, Nebraska Ecological Services Field Office

Harms said, "Our Nebraska beetles will help contribute to recovery efforts in the Great Lakes recovery area. The species recovery plan calls reintroduction and/or discovery of three, self-sustaining ABB populations in four geographic areas: the Midwest, Great Lakes, Northeast, and Southeast. Ohio is part of the Great Lakes recovery area. Despite extensive surveys, no wild ABB populations have been found in the Great Lakes Recovery area leaving efforts to reintroduce the ABB the only option available for reestablishment and ultimately, recovery of this unique insect."

The ABB is the largest carrion beetle in the U.S. and can be easily identified by an orange mark on its pronotum. Active at night, males and females are attracted to carrion. On discovery of the appropriate sized carcass, they mate and bury the carcass. The female lays eggs on the carcass and both male and female care for developing larvae until young ABBs, referred to as tenerals, emerge in about 30-40 days. ABBs require large unfragmented habitats free from land disturbance, which can favor the presence of other competitive scavengers. The species is a recycler, hastening the release of nutrients and minerals back into the soil.

American burying beetles were once widespread across the central and eastern U.S.; their decline is thought by many to have started in the late 1800s possibly due to the extinction of the passenger pigeon, a species that is the appropriate size for use by the ABB for reproductive purposes. ■



American burying beetle

American Burying Beetle

From Nebraska on Their Way to Ohio

Dr. Wyatt Hoback of University of Nebraska collects American burying beetles and other carrion beetles from a baited pitfall trap

Service Biologists Research Eagle Movement, Mortality

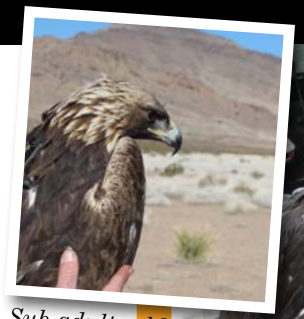
by Leith Edgar, Public Affairs Specialist

Some golden eagles *(Aquila chrysaetos canadensis)* in the West are flying high while carrying miniature satellite backpacks that U.S. Fish & Wildlife Service (Service) biologists added to the birds this year.

The golden eagles were equipped with 45-gram satellite transmitters (attached with a lightweight harness) as part of an ongoing study of their movements and major causes of mortality. So far Service biologists (in collaboration with Jicarilla Apache Tribe, Southern Ute Indian Tribe, Navajo Nation, Bureau of Land Management, and Arizona Game & Fish Department) in the southwest have gathered data from seventy-one birds in the Four Corners region. The study is in the process of expanding into the Southern and Northern Rocky Mountains. In 2013, seven nestling eagles from four nests were outfitted with the solar-powered transmitters in Colorado and Wyoming, with plans to deploy more transmitters in parts of Colorado, Wyoming, western Nebraska, and Montana in 2014.

"We're trying to fill an important knowledge gap on how golden eagles move across the landscape—the 'where' and 'when' they travel," said Brian Smith, Deputy Chief for the Region 6 Migratory Bird Program. "This study will help reveal how golden eagles move throughout western North America and what types of threats these birds of prey encounter most."

The golden eagles selected for the study are located by biologists in the wild and either captured as sub-adults or adults, or they are fitted with transmitters as nestlings before they are able to fly. When biologists outfit nestlings, they either repel or climb to the nests, depending on whether nests are sited on cliffs or in trees.



Sub-adult golden eagle prior to release

Fifty-five day old golden eagle nestlings fitted with transmitters

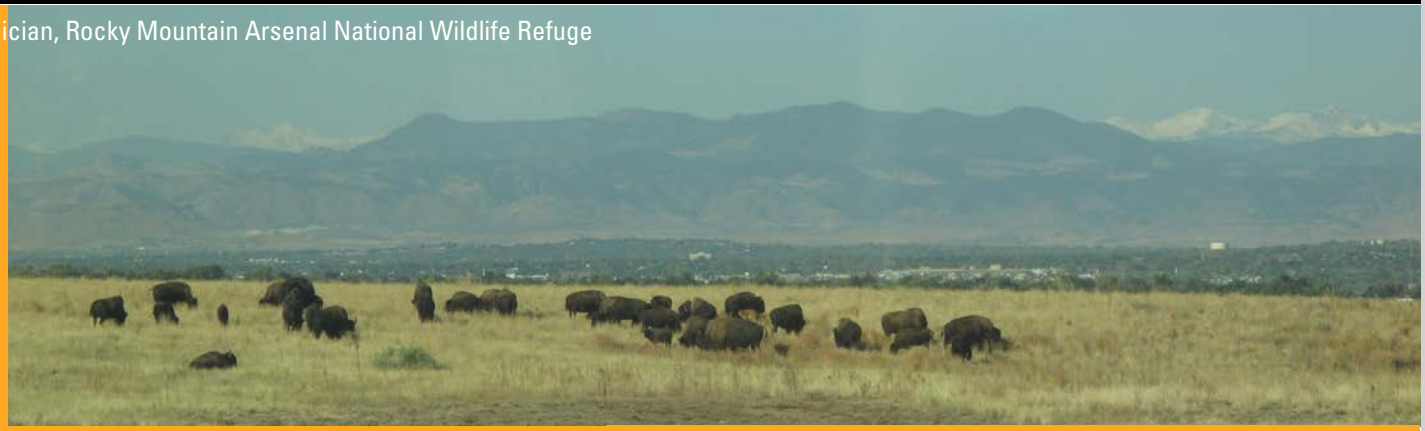
Once a transmitter is affixed, biologists track the bird's movements for as many as four years; the maximum expected life of a transmitter. Eventually the transmitter either malfunctions and remains on the bird or falls off, or the bird dies prior to the failure of the transmitter. Biologists are usually able to track down the functioning transmitters of deceased birds to determine the cause of mortality.

Preliminary data suggest that juvenile golden eagles tend to wander, often moving hundreds or even thousands of miles in their first few years in search of suitable, unoccupied habitat. In some cases birds from the Southwest flew north in the spring, and even sometimes settled at elevations greater than 10,000 feet for a month or two. Until the transmitters were employed, researchers weren't aware that golden eagles would use habitat above treeline for that length of time.

Although the research is nascent and ongoing, biologists think the extra load some birds are carrying through the air today will help wildlife managers in the future ensure that golden eagles continue to soar through western skies for future generations to appreciate. ■

The study was funded in part by the Service's Office of Science Applications, Headquarters and the Region's Migratory Birds program, and may also be supported by interested state fish and game agencies.

by Analisa Rodriguez, Range Technician, Rocky Mountain Arsenal National Wildlife Refuge



Bison Research & Monitoring at Rocky Mountain Arsenal National Wildlife Refuge

The Rocky Mountain Arsenal (RMA) National Wildlife Refuge (NWR) is one of the largest urban refuges in the country. It is located only minutes from downtown Denver, Colorado and is home to over 330 wildlife species. The American bison is the top wildlife attraction at the Refuge. This magnificent species continues to open the door for wildlife research and environmental education.

Once nearly extinct due to Western settlement, the great American bison again reigns as the king of the plains here on the Refuge. In March of 2007, 16 bison were translocated from the National Bison Range in Montana to the RMA. Currently, the RMA has a population of 86 bison; 16 calves were born just this summer season.

The annual bison roundup will be conducted in December 2013. Lee Jones, a Wildlife Biologist at the Wildlife Health Office, scans each bison for their internal chip and takes hair, blood and fecal samples. The samples are then taken back to the lab and analyzed. The results then assist Jones' report to Service staff on which bison to keep at the Refuge and which to transport elsewhere. Since bison maintain a lengthy life span of approximately 25 years, this public auction provides a safe alternative for these bison. Seven other refuges were also chosen to receive small herds of bison in efforts to preserve genetically unique bison genes. As of today, no evidence has been found disproving genetically pure bison at the RMA NWR. Currently, Service staff is preparing additional rangeland for the bison herd. It is projected that an estimated 4,000 additional acres of native prairie will be set aside for expansion of the current bison pasture. In total, the bison pasture will amount to approximately 12,000 acres. *(continued)*

Photos (left-right): Bison and calf / Courtesy of U.S. Army
Bison herd at the Rocky Mountain Arsenal NWR

Denver skyline view from Rocky Mountain Arsenal / Courtesy of U.S. Army

Bison Research & Monitoring at Rocky Mountain Arsenal National Wildlife Refuge

Bison and calf / Courtesy of U.S. Army

Although Service staff conducts various research projects of its own, third party researchers also utilize the Refuge for their own research projects. From June 5, to September 1, 2007, Michelle Osgood performed a Bison Vocalization research study as part of her master's thesis from the University of Northern Colorado. She created two research objectives: documenting the acoustic characteristics of the vocalizations emitted by bison and determining if calls emitted by bison cows and calves were individually recognized. Data collections were recorded twice weekly over the summer of 2007 between species outside and inside the fenced bison pilot project area. These animals were approached in vehicles or on foot less than or equal to 200 meters. Results on this pilot project are still pending.

Doctoral student, Gaddy Bergmann, from the University of Colorado in Boulder is currently conducting his research at the Refuge: the project is entitled *Variation in Foraging and Microbiota of the American Bison*. Bergmann is trying to determine whether bison gut bacterial community composition may shift to changes in the diet of the bison. Due to the importance of bison ranching and bison prairie restoration, this project should give ranchers and conservationists the information needed to effectively respond to healthy and ill bison accordingly. His project is ongoing and results are pending. ■

Wetlands, Watersheds & Whooping Cranes

by Ronnie Sanchez, Project Leader, Rainwater Basin Wetland Management District

Sunset at Rainwater Basin

Whooping crane and chick

Despite four decades of recovery actions, the whooping crane remains critically imperiled at less than 300 wild cranes in the main population, the Wood Buffalo/Aransas population. One of the biggest challenges to whooping crane survival is getting to their wintering grounds in Texas and breeding grounds in Canada safely. Most crane mortality (60-80%) occurs during migration. The threats to whooping cranes along the migration corridor are increasing due to the boom in wind power and continued drainage of wetlands for agricultural purposes. Strategic conservation of habitats along the whooping cranes migration corridor is essential to the survival of the species.

The Rainwater Basin (RWB), in south-central Nebraska, historically contained a high density of shallow, palustrine wetlands, or playas. Each wetland has an associated watershed that funnels precipitation and snowmelt to the playa. Unfortunately, more than 80% of the historic playas have been drained for cropland production and the watersheds of the remaining wetlands have been significantly altered to facilitate gravity irrigation. To capture irrigation tailwater, over 10,000 irrigation reuse pits were excavated in the watersheds of RWB wetlands. With the advent of pivot irrigation, the majority of these pits are no longer used; however, they still capture water. Pits located within the watershed must fill with water before runoff can reach and fill the wetland at the terminus of the watershed.

Despite significant wetland drainage and watershed modifications, this region still provides critical mid-latitude stopover habitat for millions of waterfowl, shorebirds, and the Wood Buffalo/Aransas population of the federally endangered whooping crane. The International Recovery Plan for Whooping Crane (WCR) identifies Nebraska as a critical mid-latitude migration area. A recent analysis documented that western RWB plays a vital role in the life cycle of whooping cranes and many, if not all of the Wood Buffalo/Aransas population of whooping cranes use RWB wetlands during migration at some point in their lives. While in the RWB, whooping cranes acquire lipid reserves, essential amino acids, and inorganic minerals that are used to complete migration and initiate nesting.

(continued)

Wetlands, Watersheds & Whooping Cranes


Whooping crane

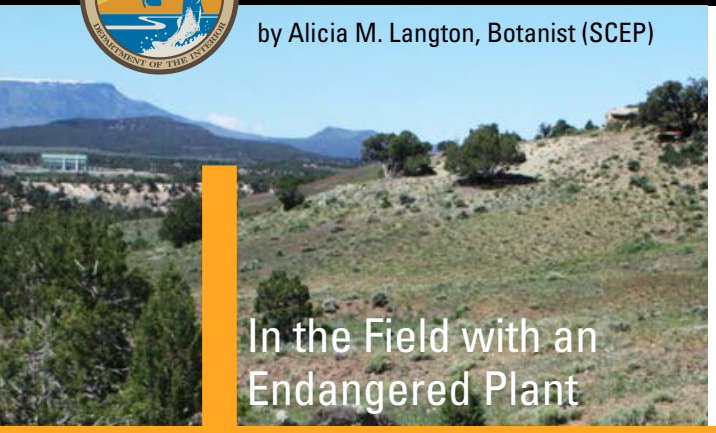
Increasing the distribution, reliability, and abundance of western RWB wetlands will influence recovery of the whooping crane. A goal of the RWB Joint Venture (RWBJV) is to fully restore at least 70% of the high-priority wetland footprints, basins and watersheds.

The long-term goal of this field project is to contribute toward the recovery of whooping cranes by conserving stopover habitat and achieving objectives identified in several developed plans. This project will ensure long-term hydrologic restoration of migration stopover sites by working with private landowners to restore wetland hydrology to high priority Waterfowl Protection Areas (WPA), thereby ensuring critically important migration habitat remains available for whooping cranes and other federal trust species.

The RWB wetlands have been modified by pits, dikes, drains, sedimentation, and fill activities within the hydric soil footprint. These modifications were meant to dry wetlands or wetland fringes in an attempt to farm the soils. Restoration activities remove the man-made modifications within the footprint, allowing the wetland to function naturally. Restoring hydrologic function is a key component of a wetland restoration project. In 2009, a Watershed Restoration Initiative was implemented to enhance wetland hydrology to eleven public wetlands. These projects have helped the conservation partners develop an effective process that has resulted in project success.

It is anticipated that approximately 140 irrigation rescue pits located in the watersheds of 15 high priority whooping crane wetlands will be filled. This project will contribute to hydrologic restoration of approximately 4,775 wetland acres of WPAs. The hydrologic restoration of RWB wetland habitat will ensure critically important migration habitat will be available to help achieve population goals for the endangered whooping crane. In addition, the restoration of RWB wetland habitat will help disperse migratory waterbirds throughout the RWB, reducing overcrowding and threat of disease outbreaks on federally and state owned lands. The project will help control and manage undesirable invasive aquatic species (e.g., reed canarygrass, hybrid cattails) and restore WPA's that have been degraded through pits, drains, and other hydrologic modifications. This project would also demonstrate the Service's willingness to work with our neighbors on mutually beneficial projects and strengthen relationships in the local community. Because portions of this project will be conducted on private lands, 10 year Stewardship/Wildlife Extension Agreements will be entered into between the Service, RWBJV, and the landowners. However, it is anticipated that the hydrologic and biologic benefits to the WPAs that will result from this project will remain in perpetuity. ■

by Alicia M. Langton, Botanist (SCEP)



In the Field with an Endangered Plant

DeBeque Phacelia: A Partnership for Protection

DeBeque phacelia habitat

A battalion of Ford Explorers snake along a dusty road graded for gas development. We stop and congregate. Hot, dry wind gusts bring temporary relief from tiny saw-toothed cedar gnats. Before us is a harsh landscape shaped by erosion, where pastel-painted cliffs rise above the juniper spotted badlands. Winding through a storm-cut ravine, we arrive at our destination - a cluster of pin flags. Marked here, DeBeque phacelia *(Phacelia submutica)*, a petite spring annual that has brought together agencies, private companies, and universities alike.

Over the last 20 years, human activities have been accumulating at an increasing pace on the Colorado Plateau – energy development (mainly gas), off-road vehicle recreation, livestock grazing, and the resulting expansion of nonnative invasive weeds – a 'tetrafecta' of threats to many of our region's endemic plant species, including DeBeque phacelia.

DeBeque phacelia, named for the western Colorado town at the center of its 128-square mile range, was listed as threatened in 2011. The species is found where most other plants are unable to survive – heavy clay soils that constrict and fracture roots while the high salinity is toxic to all but the most tolerant species. These harsh conditions also prevent DeBeque phacelia from germinating until environmental conditions are 'just right'. This fact makes the species difficult to protect: How do we survey for a species that is found abundantly in some years, and not at all in others?

To answer this crucial question, researchers from the U.S. Geological Survey and Utah State University have been funded by the Service and the Colorado Natural Areas Program. Three field seasons of data collection have yielded much laboratory data. However, translating these results to surveys for habitat in the field was impossible without input from the surveyors themselves.

To better understand the habitat as well was the needs of managers, researchers garnered expertise and experience from field biologists at the Bureau of Land Management (BLM), U.S. Forest Service, U.S. Geological Survey, Natural Resources Conservation Service and an array of consulting companies. This 'DeBeque phacelia working group' has "benefited management by helping us better understand which habitats are most likely to be suitable for *(continued)*

In the Field with an Endangered Plant

DeBeque Phacelia: A Partnership for Protection

DeBeque phacelia

these plants, improving both our work efficiency and our ability to protect these habitats," said BLM botanist Judy Perkins. Industry also hopes this work will streamline the Section 7 process; allowing clearance surveys at times when aboveground plants are not present.

Another collaboration has blossomed. Colorado Mesa University (CMU) has provided researchers with eager, dedicated student volunteers. One of these volunteers, Gwen Huffman, said that volunteering on this project has given her "a chance to apply some of the skills I am learning through my studies at CMU, as well as learn new ones." These students have not only assisted with habitat research, but additional studies on DeBeque phacelia's breeding system and seed bank. We expect to continue offering these valuable experiences to students when opportunities arise.

DeBeque phacelia habitat research

In the field, a dozen of us examine and discuss how habitat appears visually, how the characteristic surface crust sounds beneath the feet, and even how the clays feel against the teeth. We are unsteady in our ballet footwork, attempting to minimize damage to its fragile habitat. This is a year in which no plants were found, but they may be found in this suitable habitat in the future. Together, our research and collaborations are working to both conserve DeBeque phacelia and build lasting partnerships. ■


Male Greater sage-grouse with three females

Advancing Sage-Grouse Conservation

through Funding for Science Projects

The Western Association of Wildlife Agencies (WAFWA) and the U.S. Fish and Wildlife Service (Service) collaborated to fund four projects to address threats and improve the scientific basis for Greater sage-grouse management. These projects also seek to improve coordination between western states and the Service in relation to sage-grouse management. Although states are responsible for managing the species, the bird's habitat is largely on federal lands. WAFWA administered solicitation of proposals and engaged the western states and Landscape Conservation Cooperatives to help evaluate proposals. This is the first time that a landscape-scale, highly collaborative process has been used to solicit science-based proposals to further sage-grouse management. This has been an exciting development, as evidenced by the broad range of proposals received from a diverse group of state, federal, university and non-governmental organization scientists that address myriad issues facing sage-grouse.

The four projects chosen were selected from forty-two submitted proposals because they were most likely to impact sage-grouse conservation at landscape scales. The selected projects are:

Awardee	Project Title
Dr. Paul Lukacs, *University of MT*	Range-wide sampling for population size and trend estimation for Greater sage-grouse.
Dr. David Naugle, *SGI and U of MT*	Sage-grouse hate trees: A range-wide solution for increasing bird benefits through accelerated conifer removal.
Dr. Louis Provencher, *The Nature Conservancy*	Designing regional fuel breaks to protect large remnant tracts of sage-grouse habitat in Nevada, Idaho, Oregon and Utah.
Mike Gregg, *USFWS*	Using cheatgrass suppressive soil bacteria to break the fire cycle and proactively maintain Greater sage-grouse habitats.

Collectively, these projects leverage almost $800,000 in partner funding from the Joint Fire Science Program, Bureau of Land Management, and Natural Resource Conservation Service and address threats and critical information needs identified in the WAFWA Sage-Grouse Conservation Strategy.

Collaboration among land management entities at a range-wide scale helps coordinate planning, reduce redundancy, increase efficiencies and assures shared priorities. The selected projects seek to create science-based decision support tools and assist in the access and transfer of sage-grouse research data. By working in partnership and providing project funding, the Service has created a strong alliance dedicated to sustainable healthy landscapes and natural resource priorities in support of sage-grouse conservation. ■

by Ivy Allen, Native American Liaison

South Unit of Badlands National Park

Tribal Roundtable

In August 2013, the U.S. Fish and Wildlife Service (Service) Mountain-Prairie Region, hosted a Tribal Leadership Roundtable discussion in Rapid City, South Dakota, to enhance communication and collaborative partnership efforts to more successfully address our mutual interests in fish, wildlife and plant conservation across our eight-state region. Discussed were ways to advance collaborative Service and Tribal conservation priorities while improving the working relationship among the Service and the Tribes.

Overall, the meeting was acknowledged as a success with 13 Tribes participating and 25 Tribal members engaging in the workshop style roundtable. The Service brought seven senior leaders from the region to engage in the open dialogue and learn where the priorities overlap. Everyone was able to identify and focus on joint conservation actions. Leadership from both the Service and Tribes took away new ideas for projects and creative ways for future conservation efforts.

Swift fox

As an outcome of the gathering and open conversations, the Service hopes to improve its working relationships with Tribes across the Region and increase awareness of collaboration conservation priorities and projects for the benefit of fish and wildlife.

After the meeting concluded, leadership from the Service traveled to Pine Ridge Reservation for a tour of the Lakota landscape, which is part of a long-range plan to reintroduce bison on the South Unit of Badlands National Park. Trudy Ecoffey, Wildlife Biologist for the Intertribal Buffalo Council, led the tour and described the plan as a partnership effort with the National Park Service. The Oglala Sioux Tribe currently has about 800 bison which many eventually inhabit some portion of this area.

During the tour, other sites of interest that Service leadership visited included two project areas that had received funding through the Tribal Wildlife Grant (TWG) program. The first project was the successful effort to reintroduce swift foxes on six sites within the reservation and to monitor the effort over a two-year period. In addition, restoration of the species provides an important cultural link to traditional Lakota spiritual practices that include the swift fox. The second project site visited was an area where funding was provided for a comprehensive study and management of the Rocky Mountain bighorn sheep located within the boundaries of the Pine Ridge Indian Reservation. ■


Tribal officers in training

Tribal Officer Training

The Office of Law Enforcement (OLE) in Region 6 hosted training for Tribal officers in New Town, North Dakota, in July 2013. Agents from Regions 1,5, 6, and Headquarters, Refuge Officers from Regions 3 and 6, and one National Park Service Ranger provided the instruction. Courses included federal wildlife protection laws within Indian Country, authority and jurisdiction, search and seizure, raptor identification, crime scene analysis, defensive tactics, firearms re-qualification, officer safety/use of force scenarios and drills, ethics, and National Eagle Repository information. Speakers included the United States Attorney and an Assistant United States Attorney for the District of North Dakota, the Three Affiliated Tribes Tribal Chairman, the Native American Fish & Wildlife Society (NAFWS), Great Plains Regional Director, and the Director of the Three Affiliated Tribes.

The Region 6 OLE provided 10 instructors to conduct the in-service training and *Advanced Use of Force Training* for Tribal officers. This training was supported by the NAFWS and was hosted by the Three Affiliated Tribes (Mandan, Hidatsa & Arikara Nation) in the Great Plains Region.

Thirty-four Tribal conservation officers attended the 40-hour course of instruction and represented Tribes from Arizona, Montana, North and South Dakota, Utah, and Wyoming. OLE also provided the non-lethal training weapons, ammunition, portable shoot house and safety equipment, and conducted role player scenario and shooting drills for the Tribal officers during *Advanced Use of Force Training*. By all accounts, the training was very much appreciated and a resounding success. ■


Tribal officers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Meadowlark

Surrogate Species

Tallgrass prairie / Miguel Vieira

As winter begins, so do efforts to bring the first selection of a surrogate species landscape, the Flint Hills in Kansas, to life. This geography will be the first "proof of concept" for a surrogate species approach in the Region, because it is a priority grassland area in need of conservation. Efforts in this landscape will focus on existing responsibilities for federal trust species, which will help inform the future selection of surrogate species. Success on this project can only be achieved with the dedication and partnership of the Service and the Kansas Department of Wildlife, Parks and Tourism (KDWPT).

Three teams are navigating this effort, including; a *Regional Oversight Team*, composed of each program Assistant Regional Director or their designee and KDWPT leaders; the *Regional Technical Team* composed of the technical experts from the Region and partners; and the *Regional Science Team* composed of representatives with scientific expertise. Over the next months, the *Regional Technical Team* will focus on the tallgrass prairie geography through two face-to-face workshops in Kansas and two or more working teleconference calls throughout the planning phase.

These three teams and many other individuals will be working to deliver the following objectives:

1. Define the geographic boundary for the Flint Hills surrogate species landscape.
2. Create a list of potential or preliminary surrogate species for this landscape.
3. Identify desired population objectives.
4. Develop and define the deliverable conservation actions.
5. Discuss any necessary alignment of organizational infrastructures to achieve those conservation objectives.
6. Lay a foundation that will be further refined for the surrogate species approach. ■

Closing Shots







Pallid sturgeon release in South Dakota by Spencer Neuharth